NON-TECHNICAL SUMMARY (NTS)

PROJECT: GVOZD 2 WIND FARM

E3 CONSULTING

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1 Introduction

This Non-Technical Summary (NTS) provides an overview of the environmental and social aspects of the Gvozd Wind Farm Project, located in the municipality of Nikšić, Montenegro. Govzd Wind Farm Project includes two components, i.e. Gvozd 1 and Gvozd 2, which are described in detail in the following chapters. The Project is financed by the European Bank for Reconstruction and Development (EBRD) and has been assessed in accordance with national legislation and the EBRD Environmental and Social Policy (2019).

The Project is implemented by the Project beneficiary - Elektroprivreda Crne Gore (EPCG), in cooperation with the project company Green Gvozd. Green Gvozd is responsible for the development and coordination of both phases of the Project, while EPCG ensures project implementation and alignment with national energy objectives.

The Gvozd Wind Farm was originally planned with 16 turbine locations within a single development concept. During optimisation of the first phase, Gvozd 1, advances in turbine technology enabled the planned capacity to be achieved with 8 turbines. This optimisation created the basis for developing Gvozd 2, consisting of the remaining three turbine locations, within the same permitted project area.

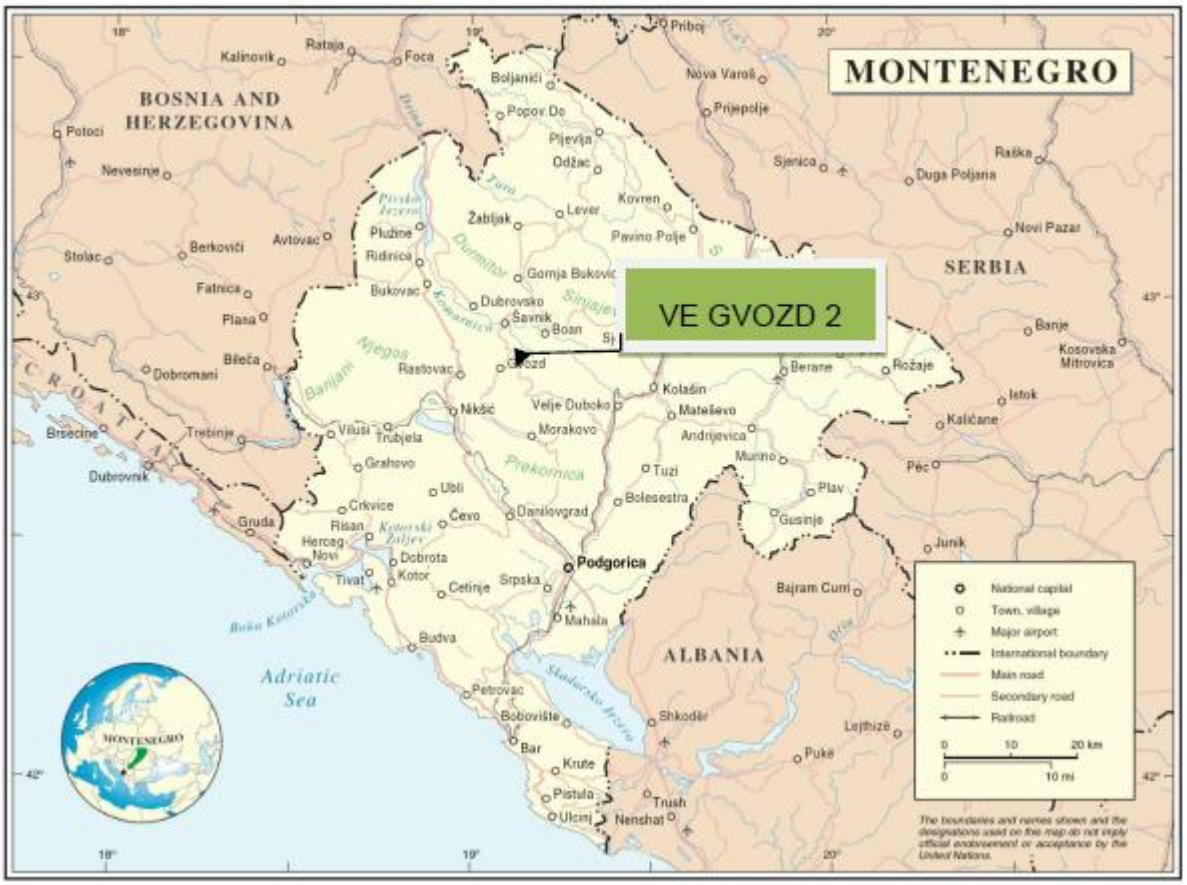

Figure 1: Location of the Gvozd Wind Farm in Montenegro

The Project is developed by Green Gvozd, a company jointly established by Elektroprivreda Crne Gore (EPCG) and Ivicom Holding GmbH. Together, Gvozd 1 (54.6 MW) and Gvozd 2 (21 MW) form a single 77 MW wind power development, expected to generate around 210 GWh annually.

2 PROJECT DESCRIPTION

The following sections provide a description of the location of the Gvozd Wind Farm, including separate descriptions of the two components of the Wind Farm, i.e. Gvozd 1 and Gvozd 2.

2.1 Location

The Project is located on the Gvozd plateau within the Cadastral Municipalities (CM):

- **CM Gradačka Poljana**
- **CM Ćeranića Gora**
- **CM Konjsko**

These cadastral units contain all 11 turbine locations (for Gvozd 1 and Gvozd 2), access roads, the internal cable network and the site of the Gvozd 110/33 kV substation. The area is characterised by open grassland, pasture, local forest patches and rocky ground. The nearest settlements are Gvozd, Ivanje, Lukovo and Rubeža.

The wind turbines are positioned on micro-locations already defined in the Local Study of Location "Gvozd" and included in the original permitting process.

2.2 Technical description – Gvozd 1

Gvozd 1 represents the first phase of the wind farm and consists of **8 wind turbines** installed on the Gvozd plateau. The initial project concept included 16 turbine locations, but the development was optimised following detailed technical assessments, allowing the phase to reach its required capacity with eight turbines.

Key project characteristics (Gvozd 1):

- **Installed capacity:** 54.6 MW
- **Number of turbines:** 8
- **Turbine model:** large-scale modern wind turbines suitable for high-elevation plateau conditions (model and dimensions defined in original Gvozd 1 permitting documentation)
- **Infrastructure:** internal 33 kV cable network, access roads and crane pads, all constructed within the project area defined in the Local Study of Location "Gvozd"

Gvozd 1 is connected to the newly built **Gvozd 110/33 kV substation**, which collects energy from both phases of the Project. From the substation, electricity is transmitted via two 110 kV overhead lines to Krnovo and Nikšić substations.

The expected annual generation of **Gvozd 1 is approximately 147 GWh**, as defined in the original technical documentation.

2.3 Technical description – Gvozd 2

Gvozd 2 represents the extension of the wind farm and consists of the remaining locations from the original turbine layout. These locations were part of the initial planning and permitting process and were included in the land acquisition conducted for the full wind farm area.

Gvozd 2 includes **three** modern Nordex N163/6.X turbines, each with:

- **Rated capacity:** 7 MW
- **Rotor diameter:** 163 m
- **Hub height:** 113 m
- **Maximum tip height:** approximately 194.5 m

The total installed capacity of Gvozd 2 is **21 MW**.

These turbines incorporate the latest generation of wind technology, enabling high efficiency in the wind conditions characteristic of the Gvozd plateau. Their design allows for optimal performance within the existing wind farm layout, and the three locations were selected to complete the originally planned configuration without requiring additional land.

Gvozd 2 connects to the same internal 33 kV network and delivers electricity to the Gvozd 110/33 kV substation, which is designed to accommodate the entire 77 MW output of Gvozd 1 and Gvozd 2 combined.

The expected annual generation of **Gvozd 2 is approximately 63 GWh**, based on resource assessments undertaken as part of the Project's development.

2.4 Infrastructure and grid connection

Electricity from the wind farm is collected at 33 kV and delivered to the **Gvozd 110/33 kV substation**, which is designed for the full 77 MW export capacity. The Project connects to the national grid through two 110 kV transmission lines:

- Gvozd – Krnovo (approximately 2.9 km)
- Gvozd – Nikšić (approximately 14.7 km)

Access to turbine locations is provided through a combination of existing roads and newly upgraded segments planned as part of the original wind farm layout.

3 Project rationale

The Gvozd plateau has been identified in planning documents as suitable for wind energy development based on favourable wind conditions and land characteristics. By completing the originally planned configuration, Gvozd 2 contributes to Montenegro's renewable energy objectives, supports climate commitments and strengthens security of supply.

The extension uses land and infrastructure already included in the initial wind farm design, ensuring that the full potential of the site is achieved without expanding the project footprint.

4 Environmental and Social Baseline

The following sections present the key characteristics of the environmental and social baseline which has been taken into consideration, and in relation to which impact management and mitigation measures have been defined.

4.1 Physical environment

The area is characterised by highland terrain, grasslands, pasture and scattered forest patches. There are no permanent watercourses within the turbine locations. Background noise levels are

low and typical of rural plateau environments. Construction-related impacts such as dust, noise and machinery movement will be temporary and managed through defined measures.

4.2 Biodiversity

Baseline studies completed for Gvozd 1 and updated for Gvozd 2 include surveys of birds, bats, habitats, flora and fauna. The wider area supports species typical of high-altitude environments. No bat roosts were identified within the turbine locations.

Additional biodiversity work, including updated collision modelling and monitoring, will continue in line with EBRD requirements.

4.3 Population and land use

The project footprint does not include residential buildings. Nearby communities, including Gvozd, Ivanje, Lukovo and Rubeža, use the wider area primarily for grazing and seasonal agriculture.

Land required for Gvozd 2 is located within **Gradačka Poljana** and **Ćeranića Gora**, and was already included in the planning, permitting and land acquisition processes for the full 11-turbine layout.

No physical displacement occurs. Economic impacts relate to changes in land use and will be addressed through the Supplementary Resettlement Plan.

5 Environmental and Social Documentation

A comprehensive set of environmental and social documents has been prepared for the Gvozd wind farm in accordance with national legislation and the EBRD Environmental and Social Policy (2019). The key documents include:

- **Environmental Impact Assessment (EIA) (2021)** for the Gvozd wind farm[1], including public disclosure and approval procedures.
- **Environmental and Social Assessment (ESA)** prepared for alignment with EBRD requirements, covering environmental, social, health and safety aspects.
- **Social Impact Assessment Study (2019)** describing communities, land use, livelihoods and social baseline conditions.
- **Biodiversity surveys** for birds, bats, habitats, flora, mammals, reptiles and amphibians, including updated assessments for Gvozd 2.
- **Environmental and Social Assessment Report (ESAR) (2022)** which includes analysis of the identified impacts and additional measures which shall be implemented
- **Land Audit Report (2022)**, based on extensive socio-economic survey done in the project area
- **Stakeholder Engagement Plan (SEP)[2] (2022)** describing engagement activities and the grievance mechanism.
- **Environmental and Social Action Plan (ESAP)[3] (2022)** outlining actions required for alignment with EBRD Performance Requirements.

[1] EIA was done during the phase when Gvozd was developed as a single project, whereby, upon inclusion of Gvozd 2 into the scope, the Nature Protection Agency of Montenegro issued the decision stating that development of EIA is not required for Gvozd 2.
[2] Subject to update in 2025 in order to include information about Gvozd 2
[3] Subject to update in 2025 in order to include information about Gvozd 2

- **Environmental and Social Assessment Report (ESAR) (2025)** which is an update of the ESAR developed in 2022, with the purpose of including assessment of Gvozd 2 into the E&S documentation
- **Construction and operational management plans**, which will guide environmental and health and safety performance during implementation.

These documents form the basis for assessing and managing the environmental and social impacts of Gvozd 1 and Gvozd 2 and are disclosed in accordance with national and EBRD requirements.

6 Key Environmental and Social Impacts and Mitigation

Key environmental and social impacts and mitigation measures which have been identified and defined prior to project implementation (and which are complied with on site by all contractors and sub-contractors) are presented in sections below, per project phases.

6.1 Construction phase

Construction impacts include temporary disturbance to soil and vegetation, dust emissions, increased traffic and noise, and potential disturbance to fauna. These impacts will be mitigated through:

- dust and emissions control
- erosion and drainage measures
- proper management of materials and waste
- ecological supervision when required
- traffic management and coordination with communities
- contractor environmental and safety requirements

6.2 Operational phase

Potential impacts during operation include collision risk for birds and bats, operational noise, shadow flicker and community health and safety considerations related to turbines and electrical infrastructure.

Mitigation includes biodiversity monitoring, adaptive management if needed and verification of noise and shadow flicker performance.

7 Land acquisition

Land required for the Gvozd Wind Farm (entire project, including Govzd 1 and Gvozd 2) was acquired through a combination of negotiated purchase and, where necessary, expropriation for public infrastructure, in accordance with the decision on public interest[4]. The land parcels for all 11 turbine locations, access roads and the Gvozd substation were included in the original planning and land acquisition scope.

Most of the land for turbine foundations and associated infrastructure was acquired through direct agreements between Green Gvozd, Ivicom and EPCG and the respective landowners. These agreements were reached amicably and without court involvement, following a process of consultation, valuation and notary confirmation. Part of the land had previously been rented by Green Gvozd for meteorological measurements during early project development.

[4] Decision on Public Interest issued by the Government of Montenegro on 20th March 2023

For a smaller number of parcels, the land could not be purchased through negotiated agreements due to complex ownership structures, including cases with many co-owners or owners living abroad. In these situations, the remaining land was acquired through expropriation led by EPCG, applying the same compensation principles used in negotiated settlements. No physical displacement is involved, and compensation has been provided for land use changes. Because Gvozd 2 uses the remaining permitted turbine locations, **no additional land acquisition was required** for the extension.

8 Stakeholder Engagement

Stakeholder engagement follows the Stakeholder Engagement Plan (SEP). Activities to date have included:

- disclosure and public hearings during the EIA process
- meetings with communities and authorities
- consultations with landowners during land acquisition
- information published on the Green Gvozd website (available at: https://green-gvozd2.com)

Engagement will continue throughout construction and operation to ensure ongoing communication with affected communities.

9 Grievance Mechanism

A grievance mechanism is available for community members, land users and other stakeholders. Grievances may be submitted:

- in person
- by phone
- by email or post
- using the SEP grievance form
- via grievance boxes placed at the site

All grievances are registered within five working days and answered within twenty working days. Anonymous submissions are accepted and confidentiality is ensured. A separate worker grievance mechanism is available for employees and contractor staff.

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